

APC™

by Schneider Electric

Installation and Operation

Smart-UPS™ RC

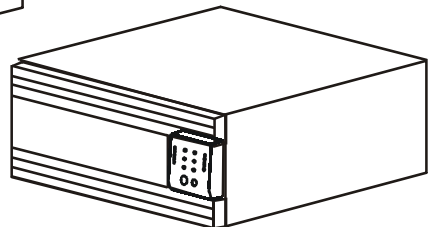
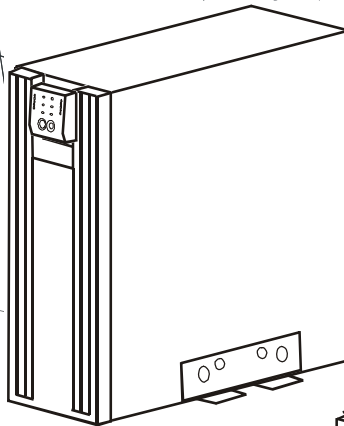
Uninterruptible Power Supply

Tower/Rack-Mount 4U

XLI/XLI-CC

SRC1000/2000/3000 VA

220/230/240 Vac



Smart-UPS[™] RC
Uninterruptible Power Supply
Tower/Rack-Mount 4U

XLI/XLI-CC
SRC1000/2000/3000 VA
220/230/240 Vac

English

General Information

Safety Messages

Read the instructions carefully to become familiar with the equipment before attempting to install, operate, service or maintain the UPS. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



The addition of this symbol to a Warning or Caution product safety label indicates that a hazard exists that can result in injury and product damage if the instructions are not followed.

 CAUTION
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<p>CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.</p>

CAUTION

<p>CAUTION addresses practices not related to physical injury including certain environmental hazards, potential damage or loss of data.</p>



Safety Information

**Inspect the package contents upon receipt.
Notify the carrier and dealer if there is any damage.**

- Adhere to all national and local electrical codes.
- All wiring must be performed by a qualified electrician.
- Changes and modifications to this unit not expressly approved by APC could void the warranty.
- This UPS is intended for indoor use only.
- Do not operate this UPS in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- For a UPS with a factory installed power cord, connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- The battery typically lasts for two to five years. Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life.
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- The batteries are heavy. Remove the batteries before installing the UPS and external battery packs (XLBPs), in a rack.
- Always install XLBPs at the bottom in rack-mount configurations. The UPS must be installed above the XLBPs.
- Always install peripheral equipment above the UPS in rack-mount configurations.

Deenergizing safety

The UPS contains internal batteries and may present a shock hazard even when disconnected from the branch circuit (mains). Before installing or servicing the equipment check that the;

- input circuit breaker is in the **OFF** position
- XLBP battery modules are disconnected

Battery safety

- Before installing or replacing the batteries, remove jewelry such as wristwatches and rings. High short circuit current through conductive materials could cause severe burns.
- Do not dispose of batteries by burning them. The batteries may explode.
- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes, and may be toxic.

General information

- The UPS will recognize as many as 9 external battery packs connected to the UPS.
Note: For each XLBP added, increased recharge time will be required.
- The model and serial numbers are located on a small, rear panel label. For some models, an additional label is located on the chassis under the front bezel.
- Always recycle used batteries.
- Recycle the package materials or save them for reuse.

Introduction

Product Description

The APC™ by Schneider Electric Smart-UPS™ is a high performance uninterruptible power supply (UPS). The UPS provides protection for electronic equipment from utility power blackouts, brownouts, sags, surges, small utility power fluctuations and large disturbances. The UPS also provides battery backup power for connected equipment until utility power returns to safe levels or the batteries are fully discharged.

Unpack Package Contents

Read the Safety Guide before installing the UPS.

Inspect UPS upon receipt. Notify carrier and dealer if there is damage.



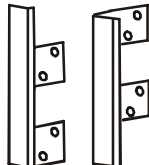
Packaging is recyclable; save it for reuse or dispose of it properly.

Check UPS package contents:

- UPS
- Front bezel
- Front display panel
- Input power cord
- Serial cable
- Stabilizer/rack-mount brackets
- Hardware supplied listed in table below
- Literature kit containing:
 - Product documentation
 - Smart-UPS™ RC User Manuals CD
 - PowerChute™ Business Edition Utility CD
 - Safety information
 - Warranty information

NOTE: The model and serial numbers are located on a small, rear panel label. For some models, an additional label is located on the chassis under the front bezel.

Hardware supplied

8		Rack-mount configuration: Pan head screws for securing rack-mount brackets to unit
2		Tower configuration: Flat head screws for securing stabilizer brackets unit
2		Rack-mount configuration brackets Tower configuration stabilizer brackets

su0211b

Accessories

Install accessories prior to connecting power to the UPS.

Refer to the APC Web site, www.apc.com for available accessories.

Optional accessories




- External battery pack (XLBP)
- 4-post rail kit

Specifications

Environmental specifications

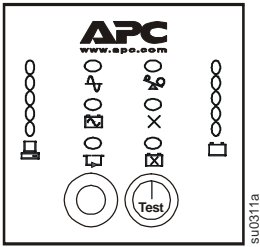
Temperature	Operating	0° to 40° C (32° to 104° F)	<p>This unit is intended for indoor use only. Select a location sturdy enough to handle the weight.</p> <p>Do not operate UPS where there is excessive dust or temperature or humidity are outside specified limits.</p> <p>Be sure air vents on UPS are not blocked. Allow adequate space for proper ventilation.</p> <p>Environmental factors impact battery life. High temperatures, poor utility power, and frequent, short duration discharges will shorten battery life.</p>
	Storage	-15° to 45° C (5° to 113° F) charge UPS battery every six months	
Maximum Elevation	Operating	3,000 m (10,000 ft)	
	Storage	15,000 m (50,000 ft)	
Humidity		0 to 95% relative humidity, non-condensing	

Physical specifications

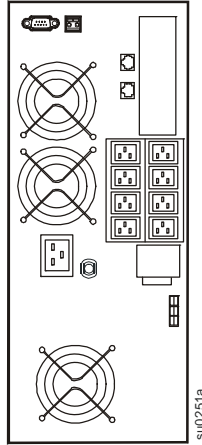
Lifting guidelines	<18 kg (<40 lb) 	18 - 32 kg (40 - 70 lb) 	32 - 55 kg (70 - 120 lb) 
UPS		1000/2000 VA	3000 VA
UPS with batteries		26 kg (57 lbs)	34 kg (75 lbs)
UPS without batteries		13 kg (29 lbs)	14 kg (31 lbs)
Each battery module		13 kg (29 lbs)	10 kg (22 lbs)
<p>1000/2000 VA models: The 96 V battery string is a single module. 3000 VA models: The 96 V battery string consists of two 48 V battery modules.</p>			
Maximum number of XLBPs supported by Smart-UPS RC			<p>10</p> <p>Combined weights of UPS and all XLBPs installed in a rack must not exceed rack weight limits.</p>
<p>Dimensions Length x Width x Height: 46 cm (18 in) x 43 cm (17 in) x 18 cm (7 in)</p>			

Front and Rear Panels


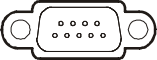


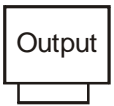


Front Display Panel



XLI Model
Rear Panel



Rear panel Features

	<p>The input circuit breaker protects the UPS from extreme overload conditions.</p>
	<p>Serial port for:</p> <ul style="list-style-type: none"> • Power management software • Interface kits <p>Use only interface kits supplied or approved by APC. Any other serial interface cable will be incompatible with UPS connector.</p>
	<p>The UPS is equipped with surge protected Network In and Network Out connectors.</p>
	<p>Emergency Power Off (EPO) terminal allows user to connect UPS to central EPO system.</p>
	<p>Cover for output hardwire terminal block.</p>
	<p>IEC320-C20 16 A current receptacles</p>
	<p>External battery pack connector</p>

Installation

Units may vary in appearance from those depicted in this manual.

CAUTION

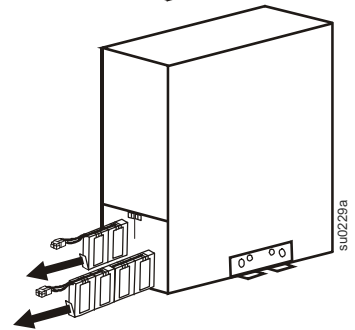
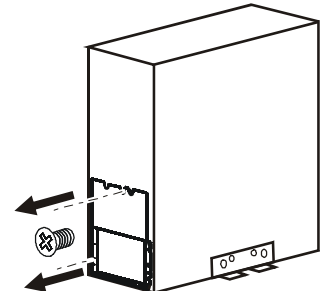
DAMAGE TO EQUIPMENT OR PERSONNEL

- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Use the battery module handle to carefully slide the battery modules in or out of the XLBP.
- Remove the battery modules before installing the UPS.
- Always install the XLBP at the bottom of the rack.
- Always install the XLBP below the UPS in the rack.
- Connect all battery strings.

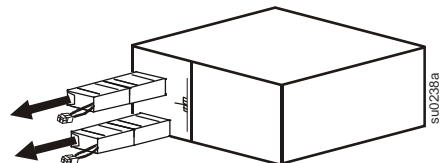
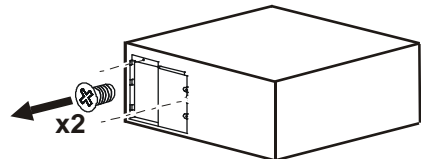
Failure to follow these instructions can result in equipment damage and minor or moderate injury.

Refer to *Physical Specifications* in this manual and the Safety Guide before installing units.

Remove screws securing battery compartment door.
To remove door, slide door up.



Remove screws securing battery compartment door.
To remove door from UPS, slide door to the right.



Output Hardwire Instructions

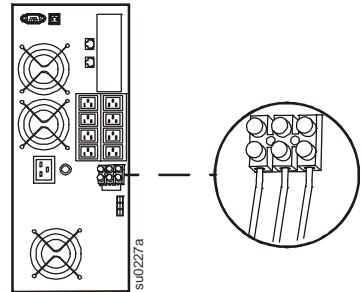
CAUTION

DAMAGE TO EQUIPMENT OR PERSONNEL

- Disconnect the mains input circuit breaker before installing or servicing the UPS or connected equipment.
- Disconnect internal and external batteries before installing or servicing the UPS or connected equipment.
- The UPS contains internal and external batteries that may present a shock hazard even when disconnected from the mains.
- UPS AC hardwired and pluggable outlets may be energized by remote or automatic control at any time.
- Disconnect equipment from the UPS before servicing any equipment.
- Do not use the UPS as a safety disconnect.
- Adhere to all national and local electrical codes.
- Wiring must be performed by a qualified electrician.
- Always connect the UPS to a grounded outlet.

Failure to follow these instructions can result in equipment damage and minor or moderate injury

- Use 1.3 mm² (#16 AWG) wire (not supplied)
 - Maximum output rating: 220-240 V, 50-60 Hz, 10 A
1. Locate the hardwire terminal block cover on rear panel of UPS. Remove the screw securing the cover and remove cover.
 2. Connect wires to terminal block. Terminals are labelled for proper wire configuration.
 3. Replace and secure cover removed in *step 1*.

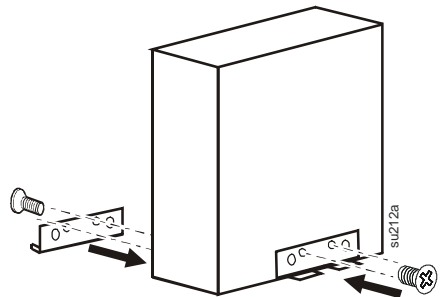


Tower Configuration

Install stabilizer brackets

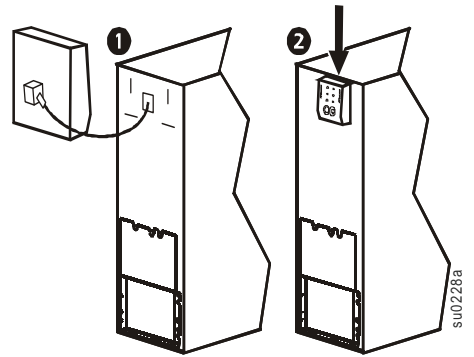
1. Stabilizer brackets must be installed on tower units.
2. Each bracket must be secured with two flat head screws (supplied).

NOTE: Screws are pre-installed on left side of unit. These screws must be removed from unit and used to secure stabilizer bracket. Screws for securing stabilizer bracket to right side of unit are included in hardware bag supplied with unit.



Install display panel

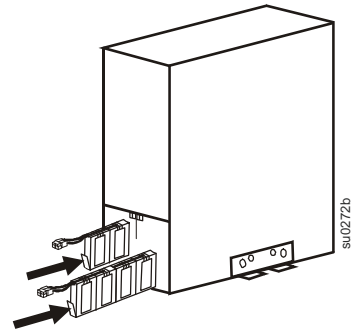
Locate UPS display panel in UPS packaging.



Install and connect batteries

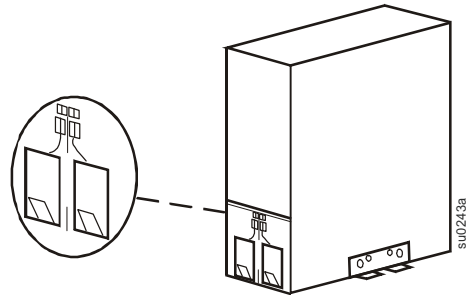
This unit is equipped with battery modules. Each module must be connected to battery connectors on the chassis.

1. Install batteries.



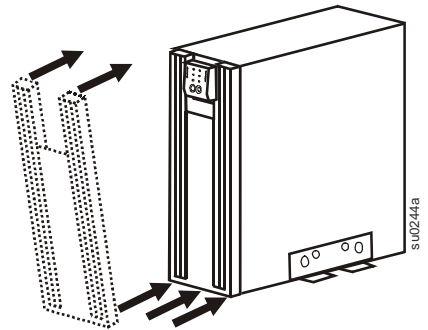
2. Connect batteries.

3. Replace battery compartment door and secure door with screws previously removed.



Install bezel

1. Fit three tabs on bottom inside edge of the bezel into slots in chassis.
2. Tip bezel forward. Fit two tabs on top inside edge of bezel into slots in chassis and snap bezel into position.



2-Post Rack-Mount Configuration

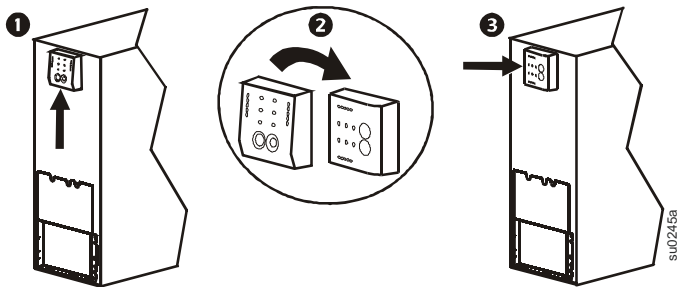
This UPS is intended for installation in a 19", two-post or four-post rack.

For details on 4-post rail and rack installation refer to instructions in rail kit.

Remove stabilizer brackets if they are installed. Remove four screws that secure each bracket.

Remove and rotate display panel

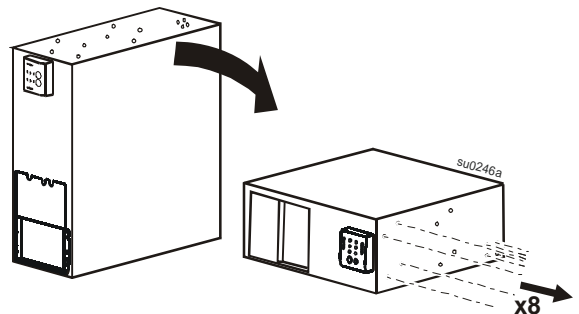
1. To remove display panel from UPS, slide display panel up. This will disengage display panel tabs from UPS.
2. Rotate display panel and insert tabs on display panel into appropriate slots on UPS.
3. Secure display panel to UPS by sliding display panel to the right.



Position UPS for mounting in rack

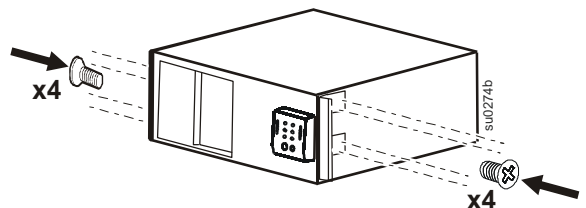
The UPS is heavy. Use caution when positioning UPS.

NOTE: The holes for securing rack-mount brackets are plugged. Remove the appropriate plugs prior to installing brackets on the unit.

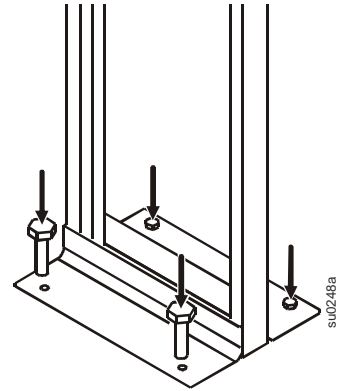


Install rack-mount brackets

Four pan head screws (supplied), must be used to secure each rack-mount bracket to UPS.



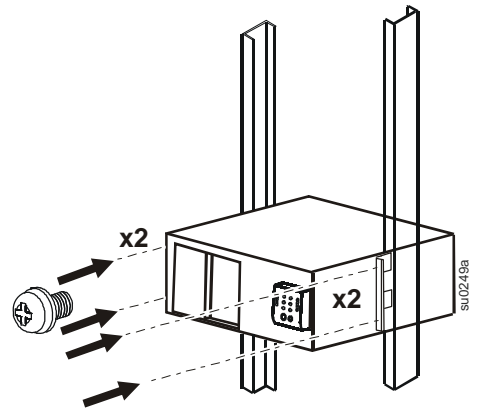
Secure 2-post rack to floor



Install UPS in rack

The UPS and XLBPs should be installed at or near bottom of rack. Always place UPS above XLBPs. Batteries must be removed from units prior to installation in a rack.

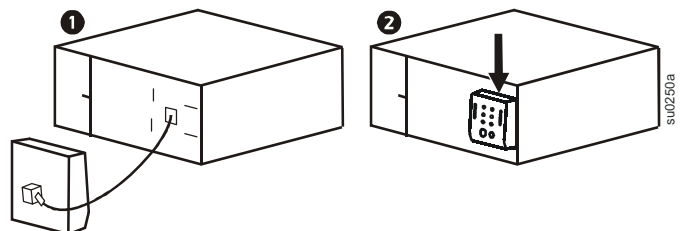
Two screws (not supplied), must be used to secure each rack-mount bracket to rack.



Install display panel

Locate UPS display panel in UPS packaging.

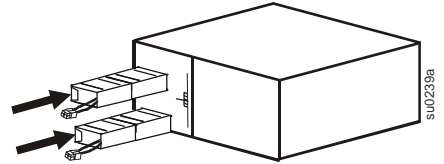
Install display panel as shown in diagram.



Connect internal batteries

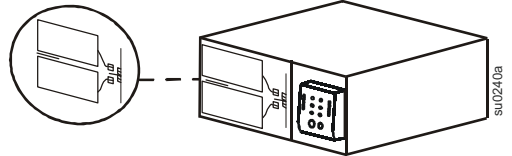
This unit is equipped with internal battery modules. Each module must be connected to battery connectors on chassis.

1. Install batteries.



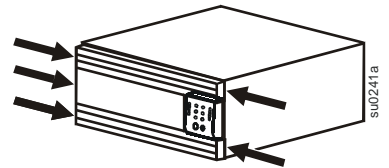
2. Connect batteries.

3. Replace battery compartment door and secure door with screws previously removed.



Install bezel

1. Fit three tabs on inside edge of bezel into slots in chassis.
2. Tip bezel toward chassis. Fit two tabs on inside edge of bezel into slots in chassis and snap bezel into position.



Start-Up

Connect Equipment and External Battery Packs to UPS



Prior to connecting the grounding cable, ensure that the UPS is **NOT** connected to utility or battery power.

1. Connect equipment to UPS (cables not supplied). **Avoid using extension cords.**
2. External battery packs provide extended runtime during power outages. This unit supports up to ten external battery packs. Refer to the APC Web site, www.apc.com for information. Refer to the user manual for the external battery pack for installation instructions.
3. Plug UPS into a two-pole, three-wire, grounded receptacle.
4. To use UPS as a master on/off switch be sure all connected equipment is switched on. Equipment will not receive power until UPS is turned on.
5. Configure Network Management card (NMC). Refer to NMC documentation for instructions.

Start the UPS

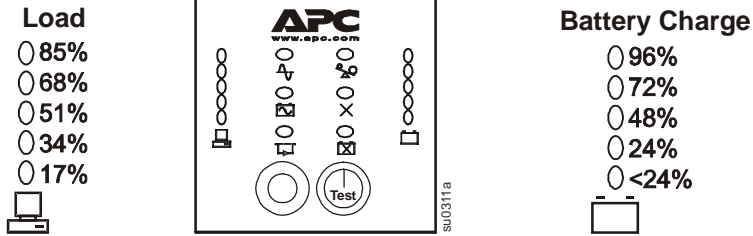
When UPS utilizes only an internal battery, the internal battery charges to 90% capacity during the first four hours of normal operation. *Do not* expect full battery run capability during this initial charge period. Allow adequate time for batteries to charge prior to turning on the UPS.

The charge time for internal and external batteries will vary depending on the number of batteries connected to the UPS. Refer to the APC Web site, www.apc.com for APC battery runtimes.

Press the **TEST** button located on the front panel of UPS.



Operation

Front Panel Display










Display Panel Function Buttons and Indicators

UPS function buttons

Button	Function
	<p>This button has three functions.</p> <ul style="list-style-type: none"> • Press this button to turn on the UPS. • Press this button to initiate a Cold Start. Cold Start is not a normal condition. When there is no utility power and UPS is off, press and hold this button to restore power to UPS. UPS will emit two beeps. During second beep, release the button. • Press this button to initiate a Self-Test. <p>Automatic: The UPS performs a self-test automatically when turned on, and every two weeks there after by default. During self-test, UPS briefly operates on battery power.</p> <p>Manual: Press and hold Test button for a few seconds to initiate self-test.</p>
	<p>This button is used to switch UPS off.</p>

UPS indicators

Indicator	Description
On Line 	The On Line LED illuminates when UPS is drawing utility power and performing double conversion to supply power to connected equipment.
On Battery 	The UPS is supplying battery power to connected equipment.
Bypass 	The Bypass LED illuminates indicating that UPS is in bypass mode. Utility power is sent directly to connected equipment during bypass mode operation. Bypass mode operation is the result of an internal UPS fault or an overload condition. Refer to <i>Troubleshooting</i> in this manual. Battery operation is not available while UPS is in bypass mode.
Fault 	The UPS detects an internal fault. Refer to <i>Troubleshooting</i> in this manual.
Overload 	An overload condition exists. Refer to <i>Troubleshooting</i> in this manual.
Battery Fault 	The battery is disconnected or must be replaced. Refer to <i>Troubleshooting</i> in this manual.
230V ○ 266 ○ 248 ○ 229 ○ 210 ○ 192 	<p>The UPS has a diagnostic feature that indicates utility voltage.</p> <p>The UPS starts a self-test as part of this procedure. The self-test does not affect voltage display.</p> <p>Press and hold the Test button to view utility voltage bar graph indicator. As soon as the On Line LED starts flashing indicating a self-test is in progress, the five-LED Battery Charge indicator to the right of the display panel will show utility input voltage.</p> <p>Refer to diagram for voltage reading. Values are not listed on the UPS.</p> <p>Indicator on UPS shows voltage is between displayed value on list and the next higher value, Refer to <i>Troubleshooting</i> in this manual for more details.</p>

Configuration

UPS Settings

Settings are adjusted through PowerChute software or optional SmartSlot accessory cards.

Function	Factory Default	User Selectable Choices	Description
Automatic Self-Test	On start-up and every 14 days (336 hr) there after	<ul style="list-style-type: none"> • Every 7 days (168 hr) • On start-up and every 14 days (336 hr) there after • On start-up only • No self-test 	Set the interval at which the UPS will execute a self-test.
UPS ID	UPS_IDEN	Up to 8 characters (alphanumeric)	Uniquely identify UPS, (i.e. server name or location) for network management purposes.
Date of last battery replacement	Manufacture date	mm/dd/yy	Reset date when you replace the battery module.
Minimum capacity before return from shutdown	0%	0%, 15%, 25%, 35%, 50%, 60%, 75%, 90%	Specify percentage to which batteries will be charged following a low battery shutdown before powering connected equipment.
Alarm delay control	Enable	Enable, Mute, Disable	<ul style="list-style-type: none"> • Mute ongoing alarms. • Disable all alarms permanently.
Shutdown delay	20 seconds	0, 20, 60, 120, 240, 480, 720, 960 seconds	Set interval between time when UPS receives a shutdown command and actual shutdown.
Low battery warning PowerChute software interface provides automatic, unattended shutdown when approximately two minutes of battery operated run time remains.	2 minutes	2, 5, 7, 10, 12, 15, 18, 20 minutes	<p>The low-battery warning beeps are continuous when two minutes of run time remain.</p> <p>Change low battery warning interval setting to the time that the operating system or system software requires to safely shut down.</p>
Synchronize turn-on delay	0 seconds	0, 20, 60, 120, 240, 480, 720, 960 seconds	Specify time UPS will wait after the return of utility power before start up, to avoid branch circuit overload.
High bypass point	+10% of output voltage	+5%, +10%, +15%, +20%	Maximum voltage that UPS will pass to connected equipment during internal bypass operation.
Low bypass point	-30%	-15%, -20%, -25%, -30%	Minimum voltage that the UPS will pass to connected equipment during internal bypass operation.

Function	Factory Default	User Selectable Choices	Description
Output voltage			Allows user to select output voltage while on-line.
220 V models	220 Vac	200, 208, 220, 230, 240 Vac	
230 V models	230 Vac	200, 208, 220, 230, 240 Vac	
Output frequency	Automatic 50 ± 3 Hz 60 ± 3 Hz	Automatic 50 ± 3 Hz, 50 ± 0.1 Hz, 60 ± 3 Hz, 60 ± 0.1 Hz	Sets allowable UPS output frequency. Whenever possible, output frequency tracks input frequency.
Number of battery strings	1	Number of connected battery strings	Defines number of connected battery strings for proper run time prediction.
		1000/2000 VA models	default setting of 1=432 VAh, 96 V x 4.5 Ah Refer to XLBP user manual for details on configuring UPS and # of battery strings.
		3000 VA models	default setting of 1=691 VAh, 96 V x 7.2 Ah Refer to XLBP user manual for details on configuring UPS and # of battery strings.

Emergency Power Off (EPO)

The Emergency Power Off (EPO) option is a safety feature that will immediately remove power to all connected equipment. When EPO button is pushed, all connected equipment will immediately turn off and will not switch to battery power.

CAUTION

RISK OF DAMAGE TO EQUIPMENT OR PERSONNEL

- Adhere to all national and local electrical codes.
- Wiring must be performed by a qualified electrician.
- Always connect the UPS to a grounded outlet.

Failure to follow these instructions can result in equipment damage and minor or moderate injury

The switch should be connected in a normally open switch contact. External voltage is not required; the switch is driven by 12 V internal supply. In closed condition, 2 mA of current are drawn.

The EPO switch is internally powered by the UPS for use with non-powered switch circuit breakers.

Connect the EPO



The EPO connector is located on the rear panel of the UPS.

1. Strip insulation from one end of each wire to be used for connecting EPO.
2. Insert a screwdriver into the slot above the terminal to be wired. Insert stripped wire into terminal. Remove screwdriver to secure wire in terminal. Repeat for each terminal.

The EPO interface is a Safety Extra Low Voltage (SELV) circuit. Connect it only to other SELV circuits. The EPO interface monitors circuits that have no determined voltage potential. Such closure circuits may be provided by a switch or relay properly isolated from the utility. To avoid damage to the UPS, do not connect the EPO interface to any circuit other than a closure type circuit.

Use one of the following cable types to connect the UPS to the EPO switch.

- CL2: Class 2 cable for general use.
- CL2P: Plenum cable for use in ducts, plenums, and other spaces used for environmental air.
- CL2R: Riser cable for use in a vertical run in a floor-to-floor shaft.
- CLEX: Limited use cable for use in dwellings and for use in raceways.
- For installation in Canada: Use only CSA certified, type ELC, (extra-low voltage control cable).
- For installation in other countries: Use standard low-voltage cable in accordance with national and local regulations.

External Batteries

APC Battery Solution

Refer to external battery pack user manual for installation instructions.

Troubleshooting

Use the table below to solve minor installation and operation problems. Refer to the APC Web site, www.apc.com for assistance with complex UPS problems.

Problem and/or Possible Cause	Solution
UPS will not turn on	
The battery is not connected properly.	Check that the battery connector is fully engaged.
Test button not pushed.	Press the Test button once to power-up the UPS and connected equipment.
The UPS is not connected to utility power supply.	Check that the power cable from the UPS to the utility power supply is securely connected at both ends.
Very low or no utility voltage.	Check utility power supply to UPS by plugging in a table lamp. If light is very dim, have utility voltage checked.
UPS will not turn off	
The UPS is experiencing an internal fault.	Do not attempt to use UPS. Unplug UPS and have it serviced immediately.
UPS beeps occasionally	
Normal UPS operation when running on battery.	None: UPS is protecting connected equipment. Press the Test button to silence this alarm.
UPS is not providing expected backup time	
The UPS battery(s) are weak due to a recent power outage or battery(s) are near the end of their service life.	Charge the battery(s). Batteries require recharging after extended outages. Batteries can wear faster when put into service often or when operated at elevated temperatures. If the battery(s) are near the end of their service life, consider replacing the battery(s) even if the Battery Fault LED is not yet illuminated.
Front panel LEDs flash sequentially	
The UPS has been shut down remotely through software or an optional accessory card.	None: UPS will restart automatically when utility power returns.
All LEDs are off and the UPS is plugged into a wall outlet	
The UPS is shut down or the battery is discharged from an extended outage.	None: UPS will restart automatically when utility power is restored and battery has a sufficient charge.
The Bypass and Overload LEDs are illuminated and the UPS emits a sustained alarm tone	
The UPS is overloaded.	Connected equipment exceeds specified “maximum load” as defined in <i>Specifications</i> on APC Web site, www.apc.com . The alarm remains on until overload is removed. Disconnect nonessential equipment from UPS to eliminate overload condition. The UPS continues to supply power as long as it is on line and circuit breaker does not trip; UPS will not provide power from batteries in the event of a utility voltage interruption.
Fault LED is illuminated	
Internal UPS fault.	Do Not attempt to use UPS. Turn UPS off and have it serviced immediately. Refer to APC Web site, www.apc.com .

Problem and/or Possible Cause	Solution
Bypass and Fault LEDs are illuminated	
The UPS has automatically switched to Bypass mode. Bypass mode operation is the result of an internal UPS fault or an overload condition while operating on utility power.	In the event an internal UPS fault occurs, Do Not attempt to use UPS. Turn UPS off and have it serviced immediately. Refer to APC Web site, www.apc.com .
Battery fault (Disconnected Battery/ Replace Battery) LED is illuminated	
The Disconnected Battery/Replace Battery LED flashes and a short beep is emitted every two seconds to indicate the battery is disconnected.	Check that the battery connectors are fully engaged.
Weak battery.	Allow battery to recharge for 24 hours and perform a self-test. If the problem persists after recharging, replace battery.
Failure of a battery self-test: Disconnected Battery/ Replace Battery LED illuminates and the UPS emits short beeps for one minute. The UPS repeats the alarm every five hours.	Allow battery to recharge for 24 hours. Perform the self-test procedure to confirm the replace battery condition. The alarm stops and the LED clears if the battery passes the self-test. If battery fails again, it must be replaced. The connected equipment is unaffected.
Input circuit breaker trips	
The connected equipment exceeds the specified “maximum load” as defined in <i>Specifications</i> on the APC Web site, www.apc.com .	Unplug all nonessential equipment from UPS. Reset circuit breaker.
There is no utility power	
There is no utility power and the UPS is off.	<i>120/230 V models only:</i> Use cold start feature to supply power to connected equipment from UPS battery(s). Press and hold the Test button. There will be a short beep followed by a longer beep. Release the button during second beep.
UPS operates on battery although line voltage exists	
The UPS input circuit breaker trips.	Unplug all nonessential equipment from UPS. Reset circuit breaker.
Your system is experiencing very high, low or distorted line voltage.	Move UPS to a different outlet on a different circuit: Inexpensive fuel powered generators may distort the voltage. Test input voltage with utility voltage display, (see <i>Operation</i> in this manual). If acceptable to connected equipment, reduce UPS sensitivity.
Diagnostic utility voltage	
All five LEDs are illuminated.	The line voltage is extremely high and should be checked by an electrician.
There is no LED illumination.	The line voltage is extremely low and should be checked by an electrician.
On Line LED	
There is no LED illumination.	The UPS is running on battery, or it must be turned on.
The LED is blinking.	The UPS is running an internal self-test.

Maintenance and Transport

Battery Replacement

This UPS has a replaceable, hot-swappable battery module. Replacement is a safe procedure, isolated from electrical hazards. Leave the UPS and connected equipment on during the replacement procedure.



Once the batteries have been disconnected the connected equipment is not protected from power outages.

Refer to the appropriate replacement battery user manual for battery module installation instructions. See your dealer or contact APC at www.apc.com for information on replacement battery modules.



Be sure to deliver the spent battery(s) to a recycling facility or ship it to APC in the replacement battery packing material.

Prepare the UPS for transport

1. Shut down and disconnect UPS from utility power.
2. Disconnect UPS from any external batteries.
3. Shut down and disconnect all equipment connected to UPS.
4. Unplug internal battery connectors.
5. Follow shipping instructions outlined in the *Service* section of this manual.

Regulatory Agency Approvals and Radio Frequency Warnings

Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Service

If the unit requires service, do not return it to the dealer. Follow these steps:

1. Review the *Troubleshooting* section of the manual to eliminate common problems.
2. If the problem persists, contact APC by Schneider Electric Customer Support through the APC Web site, www.apc.com.
 - a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on the rear panel of the unit and are available through the LCD display on select models.
 - b. Call APC Customer Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
 - c. If the unit is under warranty, the repairs are free.
 - d. Service procedures and returns may vary internationally. Refer to the APC Web site for country specific instructions.
3. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
 - a. **Note: When shipping within the United States, or to the United States always DISCONNECT ONE UPS BATTERY before shipping in compliance with U.S. Department of Transportation (DOT) and IATA regulations.** The internal batteries may remain in the UPS.
 - b. Batteries may remain connected in the XBP during shipment. Not all units utilize XLBPs.
4. Write the RMA# provided by Customer Support on the outside of the package.
5. Return the unit by insured, prepaid carrier to the address provided by Customer Support.

Limited Factory Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase. The SEIT obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. Repair or replacement of a defective product or parts thereof does not extend the original warranty period.

This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase. Products may be registered online at warranty.apc.com.

SEIT shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user's or any third person's misuse, negligence, improper installation, testing, operation or use of the product contrary to SEIT's recommendations or specifications. Further, SEIT shall not be liable for defects resulting from: 1) unauthorized attempts to repair or modify the product, 2) incorrect or inadequate electrical voltage or connection, 3) inappropriate on site operation conditions, 4) Acts of God, 5) exposure to the elements, or 6) theft. In no event shall SEIT have any liability under this warranty for any product where the serial number has been altered, defaced, or removed.

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To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Customers with warranty claims issues may access the SEIT worldwide customer support network through the SEIT Web site: www.apc.com. Select your country from the country selection drop down menu. Open the Support tab at the top of the web page to obtain information for customer support in your region. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase.

APC by Schneider Electric Worldwide Customer Support

Customer support for this or any other APC by Schneider Electric product is available at no charge in any of the following ways:

- Visit the APC by Schneider Electric Web site to access documents in the APC by Schneider Electric Knowledge Base and to submit customer support requests.
 - www.apc.com (Corporate Headquarters)
Connect to localized APC by Schneider Electric Web sites for specific countries, each of which provides customer support information.
 - www.apc.com/support/
Global support searching APC by Schneider Electric Knowledge Base and using e-support.
- Contact the APC by Schneider Electric Customer Support Center by telephone or e-mail.
 - Local, country specific centers: go to www.apc.com/support/contact for contact information.
 - For information on how to obtain local customer support, contact the APC by Schneider Electric representative or other distributors from whom you purchased your APC by Schneider Electric product.

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